

THE 2003 NASA/DoD CONFERENCE ON EVOLVABLE HARDWARE

JULY 9-11, 2003

THE WESTIN MICHIGAN AVENUE, CHICAGO, ILLINOIS, USA

HOSTED BY: NASA AMES RESEARCH CENTER

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The 2003 NASA/DoD Conference on Evolvable Hardware (EH-2003) builds upon the tradition of the successful previous meetings: the first Workshop hosted by JPL in Pasadena, 1999; the second Workshop hosted by NASA Ames in Palo Alto, 2000; the third hosted by JPL in Long Beach in 2001; and the 2002 Conference by NASA Goddard in Washington DC.

Evolvable Hardware is an emerging field that applies evolution to automate design and adaptation of physical reconfigurable and morphable structures such as electronic systems, antennas, MEMS and robots. The purpose of this conference is to bring together leading researchers from the evolvable hardware community, representatives of the automated design and programmable/reconfigurable hardware communities, technology developers and end-users from the aerospace, military and commercial sectors.

The focus of this year's conference will be evolvable hardware for reliability. Reliability issues range from fault-recovery and survivable NASA/DoD systems operating in extreme environments to intelligent adaptive and learning systems for protection of areas and security of communications.

Topics to be covered include, but are not limited to:

- Evolutionary hardware design, mechanical, electronic, others
- Co-evolution of hybrid systems, such as wetware, chemical, others
- On-line and Off-line evolution
- Testbeds and evolutionary design automation tools
- Self-reconfiguring, fault-tolerant hardware
- Hardware/software co-evolution
- Self-repairing hardware
- Embryonic hardware
- Adaptive hardware, adaptive computing
- Adaptive flight hardware
- Real-world applications of evolvable hardware
- Novel devices and platforms suitable for evolution

Co-located Event:

Those with wider interests in Genetic and Evolutionary Computation, please note that GECCO is also located in Chicago and immediate follows EH-2003, July 12-16.

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